

### **Amendments to the Claims**

Please amend claim 51 and add new claims 54-55 as follows. This listing of claims will replace all prior versions and listings of claims in this application:

#### **Listing of Claims:**

1-50. Canceled.

51. (Currently Amended) A method of producing a blastula or morula ~~embryonic or stem-like cells~~ comprising the following steps:

(i) inserting a desired differentiated human or mammalian donor cell or cell nucleus into an enucleated animal oocyte, wherein such oocyte is derived from a different animal species than the human or mammalian donor cell or cell nucleus under conditions suitable for the formation of a nuclear transfer (NT) unit, ~~and wherein mitochondria or mitochondrial DNA derived from cell or cells of said donor cell's species is incorporated into said oocyte;~~

(ii) introducing mitochondria or mitochondrial DNA derived from a cell or cells of the same species as said donor cell or cell nucleus into said oocyte;

(iii) activating the resultant nuclear transfer unit; and

(iv[[ii]]) culturing said activated nuclear transfer unit to the morula or blastula stage ~~until greater than the 2-cell developmental stage; and~~

(iv) ~~culturing cells obtained from said cultured NT units to obtain embryonic or stem-like cells.~~

52. (Previously presented) The method according to claim 51, wherein said mitochondria or mitochondrial DNA is derived from the cells of the donor.

53. (Previously presented) The method according to claim 51, wherein said donor cell is a human donor cell.

54. (New) The method according to claim 51, wherein said step (ii) may be performed before or after step (i).

55. (New) The method according to claim 51, wherein said step (ii) may be performed before or after step (iii).